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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,522	02/14/2002	Susanne H. Goodson	2001.ALC	6712

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EXAMINER	
SHEIKH, HUMERA N	
ART UNIT	**PAPER NUMBER**
1615	

MAIL DATE	DELIVERY MODE
06/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/074,522	GOODSON ET AL.	
	Examiner	Art Unit	
	Humera N. Sheikh	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *11-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

Receipt of the Response, Amendment and Applicant's Arguments/Remarks after Non-Final Office Action is acknowledged.

Applicant has overcome the following rejection(s) by virtue of the amendment: (1) The 35 U.S.C. §102(b) rejection of claims 1-10 over Pardini (US 4,708,870) has been withdrawn.

Claims 1-21 are pending in this action. Claim 1 has been amended. Claims 11-21 were previously withdrawn (non-elected subject matter). Claims 1-10 remain rejected.

Claim Objections

Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 is not further limiting because it appears as a duplicate of the claim 1 limitations. Claim 1 has been amended to include the limitation '5 to 40 mole percent of protonated amine monomer units', such as also recited in claim 3.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pardini (U.S. Patent No. 4,708,870).

The instant invention is drawn to a solid polymer film comprising a polymer comprising: 5 to 40 mole percent of protonated amine monomer units, wherein said protonation is formed by a fixed acid; and at least 60 mole percent of hydrophobic monomer units.

Pardini ('870) teaches a method for imparting a non-fugitive antimicrobial activity to an article of manufacture, which comprises forming the articles of manufacture from an acrylonitrile composition which includes up to 10% of a protonated amine. The antimicrobial activity is inherent in the acrylonitrile composition (see Abstract).

Pardini teaches that non-fugitive antimicrobial activity is imparted to acrylic polymers, fibers or fabrics made thereof, by copolymerization of an acrylic protonated amine comonomer and/or by use of protonated amine end groups (col. 2, lines 1-63).

The Examples at column 5 demonstrate various embodiments of the invention. Example 1 at Table II on column 5 demonstrates acrylonitrile (AN) and methacrylate (MA) monomers were copolymerized with various protonated amine-containing monomers. The example shows that the copolymerization of protonated amine containing monomers in acrylic polymers imparts antimicrobial activity.

With regard to mole percent claimed by Applicant, one of ordinary skill in the art would be able to make the conversion between mole percent and percent by weight. No unexpected results have been observed through Applicant's claimed mole percent since the prior art clearly teaches similar mole percents, as shown in the Examples.

The prior art teaches the same components, *i.e.*, protonated amine, for use in the same field of endeavor as the Applicants.

Given the teachings of Pardini discussed above, the instant invention, when taken as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicant's arguments filed 03/29/07 have been fully considered and were found partially persuasive.

Rejection of claims 1-10 under 35 U.S.C. §102(b) & §103(a) over Pardini (4,708,870):

Applicant argued, "Pardini teaches a method for imparting non-fugitive antimicrobial activity to an article of manufacturing by forming the articles of manufacture from an acrylonitrile composition that includes up to 10% of a protonated amine (Abstract). The antimicrobial activity is inherent in the acrylonitrile composition (Abstract). Claim 1 of Pardini states that the polymeric acrylonitrile composition comprises at least 85% by weight acrylonitrite and up to about I3% by weight of a neutral ethylenically unsaturated monomer, in addition to the "up to 10% of a protonated amine". The lowest molecular weight protonated amine is dimethyl aminoethyl methacrylate(DEAM, as the HCL salt). Therefore, as illustrated below, the maximum amount of protonate amine taught by Pardini is 3 mole %.

Claim 1 of the present invention has been amended to be directed towards a polymer film formed from 5 to 40 mole percent of protonated amine monomer units. Accordingly, Pardini cannot be said to anticipate the presently claimed invention. Further, Pardini specifically limits the amount of protonated amine to no more than 10%, or 3 mole %, in order to achieve the antimicrobial activity. Therefore, Pardini provides no motivation to one skilled in the art to seek compositions having from 5 to 40 mole percent of protonated amine monomer units, and the burden remains with the Examiner to prove otherwise."

Applicant's arguments were found persuasive with regards to the 35 U.S.C. §102(b) rejection of claims 1-10 over Pardini (US 4,708,870). Accordingly the 35 U.S.C. §102(b) rejection of claims 1-10 over Pardini has been withdrawn.

The 103(a) obviousness rejection, however, has been maintained. Applicant has not established any unexpected results, which accrue from the instant mole percents. Applicant has not demonstrated by a showing of a data comparison how his lower mole limit represents a critical minimum to obtain results different from the max of 3 mole % of the art of record. Applicant's invention is a film that is based on the variation of pH environment and changes in solubility. Applicant has not shown that the 3 mole % claimed by Pardini would not yield the desired result. Discussions in the specification of a controlled rate of dissolution are not persuasive because this limitation has not been presented in the claims, and furthermore this property would be a result that accrues from the particular polymer per se, which is shown in the art. Regarding arguments against the cited reference based on the antimicrobial property, the argument is not persuasive, for this teaching merely teaches one skilled in the art preferences for a desired property and that one not desiring antimicrobial properties would know how to eliminate this effect. For these reasons a range of 5 to 40 mole percent fails to patentably define over the cited reference.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

This application contains claims 11-21 drawn to an invention nonelected with traverse in the reply filed on 04/28/03. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

--No claims are allowed at this time.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday through Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Humera N. Sheikh

Primary Examiner

Art Unit 1615

June 11, 2007

HUMERA N SHEIKH
PRIMARY EXAMINER
TC-1600

hns